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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/191,702	11/13/1998	JEFFREY K. O'HAM	PMS251910	8926

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EXAMINER	
LEUNG, JENNIFER A	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/191,702	O'HAM, JEFFREY K.	
	Examiner	Art Unit	
	Jennifer A. Leung	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *46-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *46-51 and 53-70* is/are rejected.

7)☒ Claim(s) *52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 17, 2006 has been entered.

Response to Amendment

2. Applicant's amendment submitted on April 17, 2006 has been received and carefully considered. Claims 1-45 are cancelled. Claims 46-70 are newly added and are under consideration.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 59-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 59, it is unclear as to the structural limitation Applicant is attempting to recite by, "a depth of the matrices is between about 4 and about 18 inches", because the "matrices" are merely recited in the intended use clause of the preamble (see claim 46), and the "matrices" are not considered part of the apparatus.

Regarding claim 60, it is unclear as to the structural limitation Applicant is attempting to

recite by, "a depth of the matrices is between about 4 and about 18 inches" (line 25) because the "matrices" are merely recited in the intended use clause of the preamble, and the "matrices" are not considered part of the apparatus.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 46-51, 53, 55 and 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795).

Regarding claims 46, 48 and 49, Franz et al. discloses an apparatus comprising:

a vessel (FIG. 1) comprising a frame (i.e., support frame **5** with L-shaped carriers **6**; FIG. 1, 16);

one or more removable trays (i.e., chamber module **2**, wherein "... flanges (31) exhibit solvable elements (32) for connecting the heating module (1) with the chamber module (2)," see FIG. 1, 2, 7; column 5, sixth paragraph) inserted in and received by the frame;

a manifold for removal of gases emerging from the matrices (i.e., module **4** located at a side of the vessel, having a gas departure opening **46** for delivering gas from gas collecting area **45** to the module **4**; FIG. 1, 5); and

a heater (i.e., heating module **1**; FIG. 1, 2) positioned below the one or more removable trays **2** when the one or more removable trays are inserted in the frame;

wherein the tray comprises a bottom part (i.e., including soil carrier **13**; FIG. 1, 15) and peripheral sidewalls (i.e., chamber walls **17**; FIG. 1) extending therefrom, the bottom part is

structured so as to define orifices in the bottom of the one or more removable trays (i.e., discharge openings **14**, in the form of "perforated plates or lattice props", essentially defining a screen or slotted base, FIG. 1; column 5, second paragraph), and the sidewalls form the outer walls of the vessel when the one or more trays are inserted into the vessel (see FIG. 1).

Franz et al. is silent as to the bottom part and the peripheral sidewalls of the tray having a unitary construction. (see FIG. 15). The tray of Franz et al. requires emptying of matrices from the top of the tray after each treatment and moving the treated matrices to another location before a new batch of matrices could be loaded into the tray. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the tray in the apparatus of Franz et al. to comprise a unitary construction, on the basis of suitability for the intended use, because it has been held that making elements integral involves ordinary skill in the art. *Nerwin v. Erlichman* 168 USPQ 177 (PO BdPatApp 1969); *In reWolfe* 116 USPQ 443 (CCPQ 1958); *In re Howard* 150 US 164 (USSC 1893); *In re Larson* 144 USPQ 347 (CCPA 1965). Furthermore, Nelson et al. teaches that by making the bottom part and the peripheral sidewalls of a tray (i.e., a container **464**; FIG. 24) as a unitary construction, small volumes of excavated, contaminated material can be readily treated and moved from location to location in a contained manner (see column 31, line 32 to column 32, line 27).

Franz et al. is further silent as to the manifold **46/4** being positioned on top of the vessel, such that the manifold is raised to allow the one or more trays to be inserted into the vessel or removed from the vessel, and the manifold is lowered after the tray is inserted into the vessel and is sealed to a top edge of the one or more removable trays so that air is forced to flow through the matrices and not around the matrices. In any event, it would have been obvious for one of

ordinary skill in the art at the time the invention was made to select another suitable position for the manifold **46/4** (i.e., such as the recited location at the top of the vessel) in the apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the shifting of the location of parts merely involves ordinary skill in the art. Nelson et al. (see column 33, lines 49-57; FIG. 25 and 28) evidences the conventionality of providing a manifold (i.e., removable lid **470** having vapor outlet piping **526, 466**) that is positioned on top of the vessel (i.e., container **464**), such that the vapor contaminants that are generated by the matrices can be removed along the entire length of the vessel, in the vapor space above the matrices.

Regarding claim 47, Franz et al. further discloses a device for generating a vacuum being connected to the manifold, wherein the device inherently creates a sub-atmospheric pressure inside of the vessel (i.e., via vapor pump **49** with engine **50**; see FIG. 5).

Regarding claim 50, Franz discloses, "The dimensioning is in such a manner selected that a transport with a truck is possible," and "For making a handling possible with usual load devices of container vehicles a coupling rod between the carriers (6)(8) extends beyond that," (column 4, last paragraph). However, Franz et al. is silent as to the tray **2** comprising, specifically, forklift pockets. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide fork-lift pockets to the tray **2** in the apparatus of Franz et al., because the provision of fork-lift pockets to containers for enabling the disclosed transportation of the device using usual loading devices is well known in the art.

Regarding claim 51, Franz et al. further discloses radiant heater **12** (FIG. 2). Although Franz et al. is silent as to, specifically, 8 to 12 radiant heaters, it would have been obvious for

one of ordinary skill in the art at the time the invention was made to provide an appropriate number of radiant heaters (such as 8 to 12 radiant heaters) to the modified apparatus of Franz et al., on the basis of suitability for the intended use thereof, because the duplication of parts was held to have been obvious. *St. Regis Paper Co. v. Beemis Co. Inc.* 193 USPQ 8, 11 (1977); *In re Harza* 124 USPQ 378 (CCPA 1960), and it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, *In re Aller, 105 USPQ 233.*

Regarding claim 53, the manifold in the modified apparatus of Franz inherently comprises a heat resistant gasket (i.e., check seal **84**, of high grade steel fabric **78**; see FIG. 8, 9).

Regarding claim 55, although only a single tray is disclosed by Franz, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select an appropriate number of trays (such as between 2 and 4 trays) in the modified apparatus of Franz et al., on the basis of suitability for the intended use thereof, because the duplication of parts was held to have been obvious. *St. Regis Paper Co. v. Beemis Co. Inc.* 193 USPQ 8, 11 (1977); *In re Harza* 124 USPQ 378 (CCPA 1960).

Regarding claims 57, 58 and 59, Franz et al. discloses that for the vessel, "The dimensioning is in such a manner selected that a transport with a truck is possible." (column 4, last paragraph). Franz et al., however, is silent as to the dimensioning of tray **2** such that it comprises a loading capacity of about 2.5 cubic yards, or at least about 1 cubic foot, or a depth of about 4 to about 18 inches, for containing the bulk material **44**. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to select the recited loading capacity or depth for the tray **2** in the apparatus of Franz et al., on the basis of suitability

for the intended use and absent showing any unexpected results thereof, because changes in size merely involves ordinary skill in the art. Furthermore, a tray having a loading capacity of about 2.5 cubic yards would have been easily transported with a truck, as evidenced by Nelson et al. (see column 32, lines 1-9).

5. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795), as applied to claim 46 above, and in further view of Schultz et al. (US 4,924,785).

Franz et al. discloses it is undesirable to release contaminants into the atmosphere, and therefore destroys the vaporized contaminants from the matrices **44** via burning with flame **37** in flame tube **38** (FIG. 4; column 10, lines 64-63). Franz et al., however, is silent as to the manifold comprising a 1 to 100 micron dry filter. In any event, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide a 1 to 100 micron dry filter to the apparatus of Franz et al., on the basis of suitability for the intended use (i.e., for recovering particulates inherently entrained in the vaporized contaminants prior to exhaust) and absent showing any unexpected results thereof, because the provision of a filter to prevent the discharge of particulates into the environment is conventionally known in the art. Schultz et al. evidences conventionality by teaching an apparatus for pyrolyzing waste material, wherein the manifold (i.e., exhaust headers **82**, **120**; FIG. 5) connected to the top of the heated vessel having removable trays (i.e., baskets **50**; FIG. 5, 6; column 13, lines 3-17) further comprises a conventional scrubber or filter **121** (column 17, lines 55-61), to collect any volatiles present in the exhaust. Although a 1-100 micron dry filter is not expressly taught, the use of such commercially available filters (i.e., high-efficiency, or HEPA filters) is well known.

6. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Franz et al. (DE 196 08 002) in view of Nelson et al. (US 5,325,795), as applied to claim 46 above, and in further view of Nora et al. (EP 0 695 214).

Franz et al. discloses the lid **20** (i.e., containing the manifold portion, as modified by Nelson et al. above) comprises a plurality of means (i.e., lifting eyes **65**) for lifting of the lid **20**, and hence the manifold, from the removable tray **2**. Although Franz et al. is silent as whether the means for lifting **65** may instead comprise a hydraulic cylinder positioned under the manifold, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to substitute other known, equivalent means for facilitating lifting of the manifold portion from the vessel/tray in the modified apparatus of Franz et al., on the basis of suitability for the intended use and absent showing any unexpected results thereof, because the substitution of known equivalent structures involves only ordinary skill in the art. To evidence the conventionality of such lifting means, Nora et al. teaches an apparatus comprising a basket **C** having a casing **1** and cover **10**, wherein casing **1** and cover **10** are detachable from basket **C** by manner of a lifting means, preferably comprising pneumatic cylinders **12** (FIG. 5, 6, 7).

Response to Arguments

7. Applicant's arguments with respect to claims 46-70 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment. In any event, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention

was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Additionally, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Allowable Subject Matter

8. Claim 52 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or adequately teach the apparatus according to claim 46, wherein the apparatus comprises, in particular, the one or more removable trays for receiving matrices comprising the instantly claimed device for mechanically agitating matrices recited in claim 52.

9. Claims 60-70 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Regarding claim 60, the Examiner suggests the following claim language to overcome the rejection:

Deleting the limitation of "wherein a depth of the matrices is between about 4 and about 18 inches;" in line 25; OR

Changing the limitation to, --wherein the one or more removable trays are configured to receive matrices loaded to a depth of between about 4 and about 18 inches;--.

The claims are allowable because the prior art does not disclose or adequately teach the apparatus according to claim 60, wherein the apparatus comprises, in particular, the one or more removable trays for receiving matrices comprising the instantly claimed device for mechanically agitating matrices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer A. Leung
July 31, 2006

ALEXA DOROSHENK NECKEL
PRIMARY EXAMINER